

# HUMAN ANTIBODIES THAT BIND HUMAN TNF $\alpha$

## Abstract

5

Human antibodies, preferably recombinant human antibodies, that specifically bind to human tumor necrosis factor  $\alpha$  (hTNF $\alpha$ ) are disclosed. These antibodies have high affinity for hTNF $\alpha$  (*e.g.*,  $K_d = 10^{-8}$  M or less), a slow off rate for hTNF $\alpha$  dissociation (*e.g.*,  $K_{off} = 10^{-3}$  sec $^{-1}$  or less) and neutralize hTNF $\alpha$  activity *in vitro* and *in vivo*. An antibody of the invention can be a full-length antibody or an antigen-binding portion thereof. The antibodies, or antibody portions, of the invention are useful for detecting hTNF $\alpha$  and for inhibiting hTNF $\alpha$  activity, *e.g.*, in a human subject suffering from a disorder in which hTNF $\alpha$  activity is detrimental. Nucleic acids, vectors and host cells for expressing the recombinant human antibodies of the invention, and methods of synthesizing the recombinant human antibodies, are also encompassed by the invention.

15